8 Next Steps

FRA and ADOT considered public, resource agency, and tribal input during the Tier 1 process. If federal funding or approvals for the identified corridor alternative are needed, Tier 2 NEPA documentation would be completed before final design and construction of any passenger rail facility can occur. This chapter describes the additional analysis required for Tier 2 studies, NEPA documentation, and design needed to advance to the project level.

8.1 Tier 1 Completion

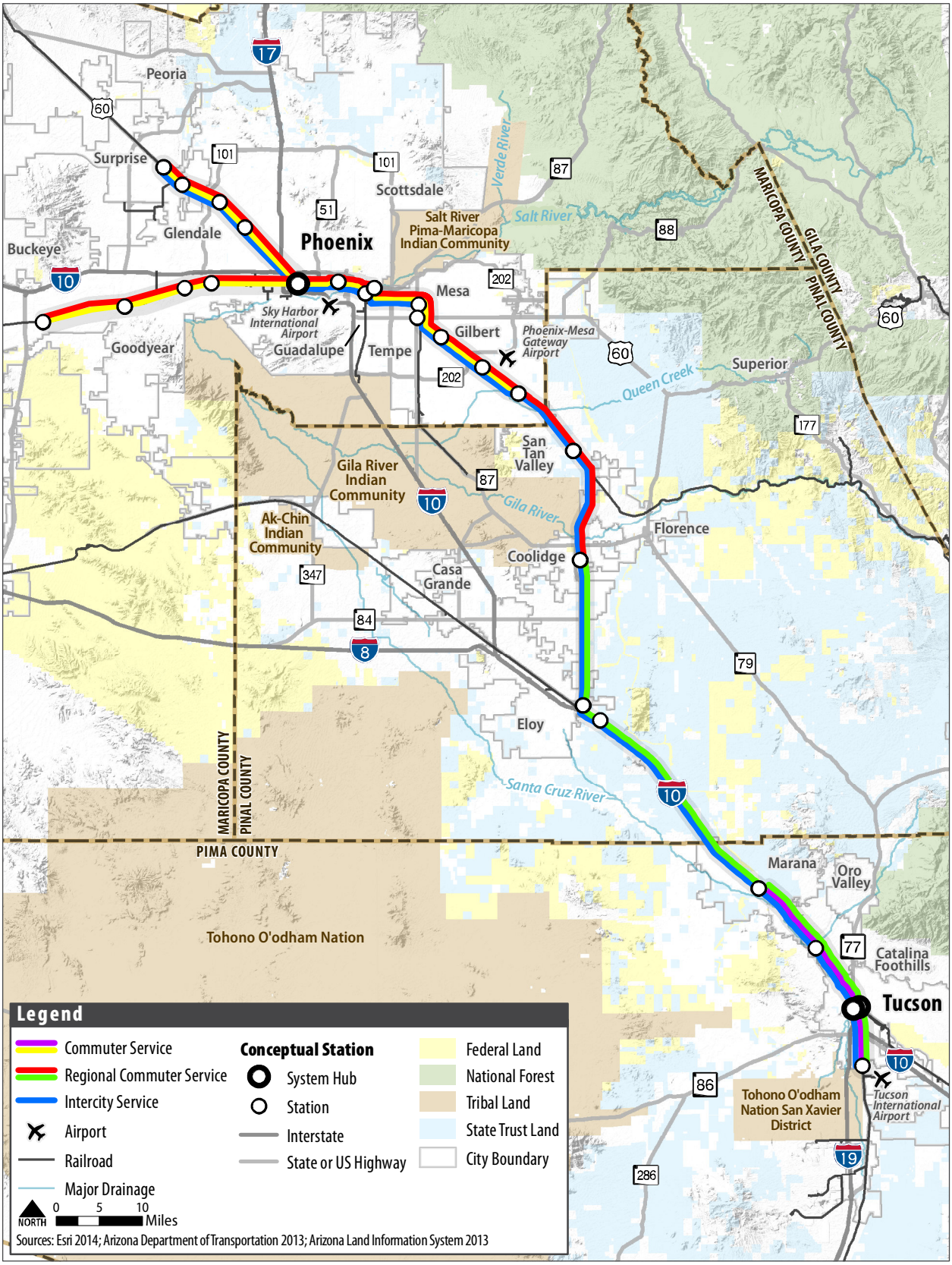
The Draft Tier 1 EIS was issued to solicit input on the corridor alternatives from the public, resource agencies, and tribes. Comments FRA and ADOT received on the Draft Tier 1 EIS during the comment period are addressed in the Final Tier 1 EIS. In part, the Moving Ahead for Progress in the 21st Century Act (MAP-21) (Public Law 112-114) streamlined the NEPA process by allowing DOT agencies to issue a combined Final EIS/Record of Decision (ROD). After the Draft EIS was published, the Fixing America's Surface Transportation (FAST) Act (Public Law 114-94) (Section 1304) was signed into law by President Obama on December 4, 2015 which also allows DOT agencies to issue a combined Final EIS/ROD. The ROD documents the agency's decision and identifies any applicable mitigation measures to be implemented and further studied in subsequent phases.

8.2 Tier 2 Operable Corridor Sections

As funding becomes available, Tier 2 studies and NEPA documentation would be advanced for logical operable sections of a passenger rail system within the preferred corridor alternative. In other words, one or more operable corridor sections that together make up the complete passenger rail system could be developed as individual projects. Any such section would be required to have independent utility with or without construction of other sections. The specific class of NEPA document for more detailed analysis of any Tier 2 section has not yet been defined. Preliminary design and environmental studies would be conducted in support of a Tier 2 analysis. No individual section of a passenger rail system has been identified for implementation, but the following proposed corridor sections, or any other functional configurations deemed viable, could be evaluated as logical, independent sections subject to available funding and the source of that funding. These corridor sections could also be combined, modified, or revisited in the future based on available funding.

Figure 8-1 illustrates a number of possible implementation phases within the preferred corridor to be further studied at Tier 2 as follows:

Figure 8-1. Possible Implementation Phases



- Amtrak Connection– Potential service can be initiated by Amtrak, using existing freight track.
- Tucson to Marana – Commuter service within the Tucson metro area.
- Queen Creek/Santan Valley to Phoenix – Commuter service within the Phoenix metro area.
- Coolidge to Phoenix – Regional commuter service between Pinal County and Maricopa County.
- Coolidge to Tucson – Regional commuter service between Pinal County and Pima County.
- Tucson to Phoenix – Intercity service.

8.3 Additional Studies

During Tier 2, further NEPA analyses will occur to determine the potential impacts of the proposed project. Depending on preliminary design concepts, surveys for special status species and wildlife movement studies may be conducted prior to the initiation of Tier 2 NEPA analyses to inform the Tier 2 analysis. While specific studies and their timelines cannot be identified at this time, coordination with AGFD and USFWS would occur during Tier 2 NEPA scoping to discuss potential effects to wildlife and habitat, and determine the need for preliminary studies and/or surveys.

In addition, coordination and outreach (as needed) would occur during preparation of a Tier 2 analysis to engage the public more fully regarding the effects on property and issues such as design for stations and other railroad facilities. Input from the outreach effort would be incorporated into the NEPA analysis and project design.

Technical studies would be completed as part of the Tier 2 NEPA analysis and tier off of the work conducted in this Final Tier 1 EIS. These studies would provide additional detail regarding the nature and magnitude of potential impacts. The analyses would consider avoidance and minimization of impacts on sensitive environmental resources. For each Tier 2 NEPA analysis, the following project-level analyses may be required:

- Detailed local-level alternatives analysis, including route options identified in Tempe and Pinal County, as shown on **Figure 7-1**, **Figure 7-2**, and **Figure 7-3**;
- Wetland delineations and identification of Section 404 permitting requirements;
- Cultural resource surveys and Section 106 consultation;

- Threatened and endangered species surveys;
- Noise and vibration analysis;
- Section 4(f) evaluation;
- Section 6(f) analysis;
- Phase I Environmental Site Assessments;
- Air emissions analysis in nonattainment areas;
- Station-area traffic studies; and
- Engineering surveys.

8.4 Coordination with Other Studies

To ensure consistency in the planning of the transportation system and to provide alternative mode opportunities in future or expanding corridors under study, the ongoing APRCS will continue to be developed in coordination with other transportation planning studies whenever possible and appropriate. Applicable studies that are currently underway and warrant coordination with the APRCS include the I-11 Tier 1 EIS between Nogales and Wickenburg, and the Sonoran Corridor Tier 1 EIS between I-19 and I-10 south of TUS. In addition, AGFD has requested that ADOT coordinate the APRCS with their analysis of the North-South Corridor's potential impacts, and incorporate those results into the cumulative impacts analysis for this study. As the studies associated with the APRCS continue, coordination of planning efforts with additional studies may also be warranted.

8.5 Mitigation Planning

In addition to the needed studies, site specific mitigation would also be developed during Tier 2. Anticipated types of mitigation include wetland mitigation, seasonal construction restrictions for threatened and endangered species, implementation of stormwater pollution and prevention plans, implementation of best management practices, and documentation of historic structures and other properties. Specific mitigation during the Tier 2 process would be determined in consultation with the federal or state agency with jurisdiction over a given resource. As needed, formal consultation would occur with resource agencies to address obligations to minimize and mitigate impacts, such as those obligations under Section 7 of the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA).

Future phases to implement a passenger rail project would require further consultation between the federal agency, Native American tribes, ADOT, and the Arizona SHPO, as well as other consulting parties, for meeting historic preservation compliance requirements pursuant

to Section 106. Depending on funding and phasing of the Tier 2 Projects, Section 106 consultation could be conducted programmatically. The Tier 2 effort would also require analysis under both Section 4(f) of the Department of Transportation Act and Section 6(f) of the Land and Water Conservation Act, and appropriate mitigation would be assessed.

8.6 Project Commitments

This Final Tier 1 EIS identifies potential mitigation measures for each relevant resource section in **Chapter 5, Existing Conditions and Environmental Consequences**. During the Tier 1 EIS process, the primary commitments have been to work with the public, public agencies, resource agencies, and tribes to identify the need for specific mitigation measures to be developed during the Tier 2 process that would be implemented during construction and operation of a passenger rail system.

8.7 Phased Implementation

Based on experience with other passenger rail projects, preliminary service development planning as part of the APRCS, and coordination with other transportation agencies, ADOT anticipates that the passenger rail system would be incrementally funded and that construction and operations would be implemented in phases. Within the approximate 20-year planning horizon specified in the Service Development Plan (SDP), initial and successive phases would be considered through the interim implementation phase, which is the last phase that would be implemented using existing SDP information.

Various potential phases and strategies defined by logical operating segments could be considered to introduce passenger rail services. Some of the options could overlap or be introduced incrementally, building on earlier phases and helping to fund the project progressively.

No individual section of a passenger rail system has been identified for implementation, but the following proposed corridor sections, or any other functional configurations deemed viable, could be evaluated as logical, independent sections subject to available funding and the source of that funding. These corridor sections could also be combined, modified, or revisited in the future based on available funding.

Figure 8-1 illustrates possible implementation phases.

- **Amtrak Connection Strategy** –Arizona working with Amtrak could introduce limited passenger service using Amtrak's existing statutory access to operate passenger rail operations over track owned by the freight railroads. This would require an agreement

with UP and a commitment to fund the necessary improvements (i.e., stations, sidings, parking, etc.). Because the service would rely largely on existing freight track, it would be subject to coordination with UP freight activity to minimize impacts on freight movement, which could limit passenger operations. Improvements would be limited to station construction at select locations and ensuring a safe operating environment for passengers at those locations (e.g., double tracking, shelters).

This configuration, extending from Surprise to TUS, would cost approximately $1.1 billion to plan and build, then implement.

- **Growing the Service Strategy** – This approach would introduce passenger service between the two major metropolitan areas using existing UP track north of Picacho (in cooperation with UP) and constructing new track in the ADOT ROW along I-10 south of Picacho to support more frequent passenger service. This option would require coordination with freight activities north of Picacho to minimize conflicts with freight traffic, but would offer transportation benefits at a much higher level of service. This approach to implementation of passenger rail service between the two major metropolitan areas would cost $2.2 billion and could carry about 15,000 passengers once planned and built.
- **Metro Phoenix Phase** – The highest potential level of service in the short term is commuter service from Santan Valley to the Phoenix hub, connecting the major East Valley communities with the potential to carry major passenger loads along the UP freight line in a corridor as yet unserved by passenger rail. This phase could be divided into additional subsections to reduce capital and operating commitments in the short term or to provide additional time to develop solutions to constraints within the corridor. This is the most challenging of the phases from a construction perspective, due to the urban nature of the corridor, as reflected by the estimated cost of $1.5 billion for the 45-mile segment. It is also the most likely to generate ridership and effectively complement other transportation options.

  Connections to Surprise (on BNSF infrastructure) and Buckeye (on UP infrastructure) west of the Phoenix hub would provide access to an additional potential ridership base. These approximately 52 additional miles of service would add about $1.3 billion to the total capital cost. The total could be reduced in the short term by building no connections, only one of the connections, or limiting service only to stations that generate significant ridership.

  Phoenix Metro 1 proposes to connect the Santan Valley with both Surprise and Buckeye. Phoenix Metro 2 would initially connect downtown Phoenix with Surprise only,

deferring a connection to Buckeye until a later time. Metro Phoenix phases have not been subject to many of the studies conducted for the Tucson to Phoenix proposal and would require all necessary design work, evaluation of rights of way and utilities, preliminary engineering, etc. These phases are assumed to be considered in any future regional transportation funding source initiatives, in addition to any federal funding for which they might qualify or private funding they might attract.

- **Metro Tucson Phase** – Commuter service in the Tucson metro area between Marana and Tucson could follow the I-10 freeway from Marana to south of Grant Road, and UP from Grant Road into downtown Tucson. While relatively straightforward from a construction perspective, this phase would require a series of decisions related to local impacts to the existing transportation system along I-10 and downtown. Building a passenger rail system between Marana and Downtown Tucson is estimated to cost approximately $900 million. Depending on the approach taken to project phasing and funding, this segment is also included in the **Growing the Service Phase** as part of the new track south of Picacho. A connection to TUS would pass through a largely urban industrial community. This effort is estimated to bring the cost for the approximately 7-mile connection to TUS estimated at $255 million.

  The Metro Tucson Phase would require a local or private funding source in addition to any federal funding that may apply.

- Intercity Phase – This phase would join the two commuter phases in the Phoenix and Tucson Metro areas with a 58-mile link, allowing a high level of intercity service. This element of the project could be developed sooner, depending on how the region evolves over the next 10 to 15 years. Intercity rail service is a highly popular feature of the project and would afford a critical link in the system that could provide passenger rail access to many growing Pinal and Pima County communities. It is also the phase that could support the highest speed performance along the line. The Picacho to Tucson section of this phase is included in the **Growing the Service Phase**. The link between Santan Valley and Picacho would cost about $600 million.

  As currently defined, the full Intercity Phase would cost about $1.5 billion, subject to available funding.

The specific phasing of a future passenger rail system would be determined as funding becomes available. Funding could be initially allocated for improvement of facilities to support higher speeds or to improve/construct particular stations and maintenance and layover facilities on existing freight railroads. Traditional and potential alternative funding sources include USDOT grant programs, federal loan programs, and public-private partnerships. Service could initially

start with fewer stations and with fewer round trips. As more funding becomes available, further construction could be implemented to expand service. The specific phasing of the passenger rail system is not known at this time but would be determined as funding is allocated and as part of Tier 2 NEPA review.

8.7.1 Station Locations and Airport Access

Station Locations

This Tier 1 EIS does not identify specific station locations for analysis. Conceptual locations were included in the AA to provide a basis for corridor definition and ridership forecasting. As part of the AA, various station typologies were developed to provide context for station decision-making and local commitments; however, the exact locations of stations would require more analysis and further agency and community input. These would be part of independent localized studies and a Tier 2 NEPA document for a passenger rail facility.

Airport Connections

Throughout the development of the Arizona Passenger Rail Corridor Study Tier 1 EIS corridor analyses, the public and stakeholder agencies identified airport access as an important consideration among their preferences as a feature of future passenger rail service.

All three major airports in the study corridor – Tucson International Airport (TUS), Phoenix-Mesa Gateway Airport (AZA), and Sky Harbor International Airport (PHX) – could have connections to a future passenger rail line, but a detailed evaluation of specific alignments, impacts, or other implications of how these connections would be accomplished was not a part of this study. These analyses would be undertaken as part of future studies.

ADOT recommends the Yellow Corridor Alternative for future Tier 2 environmental studies. Likewise, ADOT and the FRA recommend studying passenger rail connectivity to TUS for future Tier 2 studies.

As noted previously, ADOT anticipates that a Tucson-to-Phoenix passenger rail system would be funded incrementally, and that construction and operations would be implemented in phases. The specific phasing of a future passenger rail system is not known at this time but would be determined as funding is allocated and as part of the Tier 2 NEPA review.